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ABSTRACT

This report describes the initiation and development of inter-institutional preservice and inservice teacher education programs. The focus of the programs has been a specially devised environmental learning center. Preparation models and expected outcomes are presented with emphasis on humanizing the programs and improving instruction in environmental education. Assessment criteria are given for the evaluation of student competencies, and models for program evaluation are suggested. (LS)

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HUMANIZED TEACHER PREPARATION AT CISPUS

A Compendium of Ideas on Teacher Preparation and Evaluation

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PREFACE

An unusually effective learning environment and a unique teacher preparation opportunity exist at the Cispus Environmental Center, a center operated through a direct legislative appropriation under the auspices of the Office of the Superintendent of Public Instruction in cooperation with several state colleges.

It requires but a cursory experience with the Center to become aware of the unique climate of learning which encourages informality; friendly, easy human relations; flexible, open teaching; a wholesome appreciation of the beauty of our environment; and a secluded, pressure-free atmosphere. These characteristics provide an unparallelled opportunity to break the mold in public education and to add new dimensions to the teacher preparation program.

Recognizing the opportunities provided by Cispus, Mr. Lloyd J. Rowley, Director of the Center, assembled a task force under the leadership of Dr. John A. Green, Central Washington State College, and including Dr. Herbert Hite, Western Washington State College, and Dr. Harry W. Johnson, Office of the Superintendent of Public Instruction, to prepare a compendium of ideas concerning evaluation and teacher preparation at Cispus Environmental Study Center and including plans for accomplishing the following series of tasks.

I. Identify those skills and competencies it takes to be a successful teacher.

II. Identify the experiences a person studying to be a teacher should undergo in order to develop the necessary skill and competencies it takes to be a successful teacher.

III. Develop a method where we can identify which of the experiences can be accomplished through a teacher education program conducted at Cispus.

IV. Identify what additional experiences beyond the Cispus experience should be provided to the student teachers.

V. Develop a system for testing the hypothesis that a teacher education program conducted at Cispus would be a means of developing the competencies and skills necessary for good teaching.

As a guideline for its initial meeting, the task force was given a statement opening with the following paragraph:

> "The skills and competencies it takes to be a successful teacher (in the State of Washington)" must, first of all, include those skills and competencies involved in conducting the educational process and achieving the educational results described by the State Board of Education in their "Goals for the common schools." Regardless of the school or district in which a teacher works in the public schools of Washington, the State Board has mandated the process described and the results identified as minimum essentials. Additional characteristics and goals are the concern of the individual district employing the teacher.

Thus the ideas presented here are not to be viewed as the "best way" to go but rather as several viable alternatives, both in preparation models and in evaluation of the suggested preparation models. The ideas could be used as the basis for initiating interinstitutional preservice and inservice teacher preparation programs at the Center during the 1973-74 academic year. These programs should be an extension and development of the limited ongoing preparation programs which have been carried out in cooperation with Central Washington State College.

The paper is organized into three discrete sections:

1. The Introduction and Overview
2. The Preparation Models
3. The Evaluation Models

The three sections are not directly related in the sense that specific intended outcomes relate directly to a given preparation model which in turn requires a specific evaluation model. Rather each preparation model could foster the explicated outcomes and one or more of the evaluation models could be used with each preparation model.

Two followup documents should precede and/or accompany the implementation of preparation programs. These are: (1) a detailed program planning document complete with expected outcomes, specific preparation strategies and materials and detailed evaluation plans; and (2) a funding proposal for cost subsidizing the evaluation plan, including both student and program evaluation.

The evaluation proposal might be developed as a model for national dissemination and be submitted to Federal and/or private agencies for funding. In this age of educational accountability the dearth of defensible, tested program evaluation models make the funding prospects for a good proposal excellent. In any case, dollars must be set aside if evaluation is to be effective.

INTRODUCTION AND OVERVIEW

During the three years of its operation, thousands of public elementary and secondary pupils and their teachers have utilized the Cispus Center as an environmental learning site to enrich and expand their district-based educational programs. Also during those three years, in accord with legislative intent, several of the State's colleges have carried out numerous programs of in-service teacher education together with a limited pre-service program. Notable program examples offered in cooperation with Central Washington State College include:

1. Conservation Outdoor Education Workshops--annual summer offering
2. Environmental Education Workshops--offered in each quarter
3. Physics in the Environment
4. Art in the Environment
5. Music in the Environment
6. Wood Products Workshop
7. CWSC Pilot Project in Environmental Studies at Cispus
8. Man's Environment: How it May be Improved--NH Grant through the U. S. O. E.
9. Human Ecology
10. Survival Living in an Alien and Hostile Environment
11. A Federal Pilot Project in Cooperative Pre-Service Training of Teachers

The Federal pilot project was initiated in 1972-73 through a $50,000 Federal grant, and it provided two professional staff members at Cispus. Although the project fell short of its projected 45 trainees, it has been refunded for a second year and will permit continuation of the program with special emphasis on the in-service education of teachers.

In addition, during the 1973-74 year Central Washington State College will move a regular faculty member from the Department of Education to Cispus to continue the development of a preservice preparation program. Thus, during the 1973-74 year there will be four major teacher preparation efforts:

1. The inservice efforts of the Forest Service educational personnel (Mr. McDonald and Mr. Unterwegner) in cooperation with C.W.S.C.
2. The inservice College workshops and seminars carried on primarily during the summer months
3. The Federal grant inservice projects
4. The College preservice efforts

Three years of preparation experience; positive feedback from hundreds of trainees; intuitive estimates which place a high value on the programs--all signal a green light for continued development of these programs; yet it is also a propitious time for a pause to consider the opportunities and problems inherent in the teacher education efforts at Cispus.

1. The opportunity to strengthen interinstitutional preparation among the State's colleges.
2. The opportunity to increase the quality of environmental education in teacher preparation programs.
3. The opportunity to utilize peer group and colleague interaction in a preservice-inservice preparation program mix.
4. The opportunity to coordinate the recently adopted state Goals for the Common Schools with the 1971 mandated charge of developing a competency-based teacher education program.
5. The problem of coordinating all the preparation programs under one responsible administrative head without deterring interinstitutional and interagency cooperation.
6. The management problem of providing for a mix in the programs of students from several colleges and of permitting students the option of transfer from one college program to another.

7. The problem of evaluating both the trainees and the Cispus teacher preparation programs.

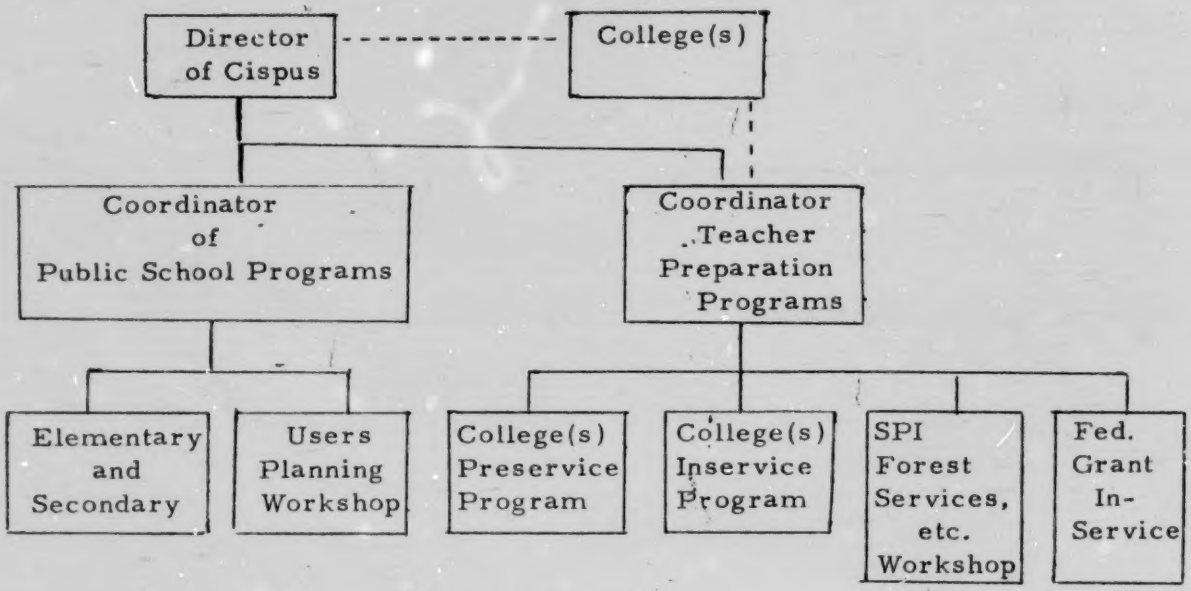
In this report attention is directed primarily at the two most urgent problems: (1) the development of inter-institutional, Cispus-oriented, preservice preparation models, and (2) the development of defensible schema for the evaluation of trainees and programs.

PREPARATION MODELS

With the expansion of the preparation programs there exists a real opportunity for interinstitutional cooperation. To avoid some of the problems of student transfer and college competition, it is suggested that there be appointed--perhaps as an interinstitutional appointment--a college coordinator of teacher preparation programs who reports administratively to the Director of the Cispus Environmental Center and who has faculty status in one or more of the colleges. This faculty status is essential if the proposal is to be given any more than cursory examination and support by the college(s). This arrangement might model on the inter-institutional Mexican program at Guadalajara with Central, Western, and Eastern participating. The following staff schematic depicts the suggested administrative scheme (Figure 1). The preparation models are subsequently described with this interinstitutional cooperation and an appropriate administrative structure in mind.

Figure 1

Suggested Administrative Structure for Cispus
Environmental Learning Center



Although this interinstitutional cooperation creates some management problems, it would provide an opportunity to alleviate the student's current transfer problem if common agreement is reached on entry criteria and exit competencies for each model. It would also provide an excellent opportunity to develop a multi-institution consortium to plan and implement a program approved under the 1971 certification guidelines.

However, prerequisite to the description of preparation models is the delineation of unique expected outcomes which the Cispus training site would foster. These outcomes fall roughly into four categories:

1. Improved understanding and skill in human relations resulting from the necessarily close and protected relationships among public school pupils, teachers, and college trainees who use the Center. The consequent expectation is that these trainees will be more inclined to listen to pupils and to take their wishes, feelings, and recent experience into account in dealing with them than the graduates of typical programs.
2. Improved understanding of child development and learning resulting from the 24-hour contact with school children and from the diversity of pupil groups and age levels with which trainees work throughout a quarter. The consequent expectation is that those trainees will be more apt than others to pace instruction to pupils' learning levels and to diversity instruction strategies to fit the pupils' individual learning styles.
3. Increased flexibility and creativity resulting from experience in a learning environment which discourages conventional and encourages divergent teaching. The consequent expectation is that these trainees will be more apt than others to innovate, to experiment, and to plan new strategies of instruction without becoming irrevocably tied to a method, plan or strategy.
4. Improved attitude toward man's physical environment and a better understanding of the need for a

rational solution to environmental problems. The consequent expectation is that these trainees will be more apt than others to integrate environmental education into the entire curriculum and to convey to pupils attitudes of appreciation of the environment and sympathetic concern for its problems.

In addition to the above cognitive and affective outcomes, students who complete the program should achieve the normally expected teacher competencies, such as those outlined in the appended draft. Two of the four outcomes or competencies listed above seem especially appropriate for teacher preparation programs at Cispus. These are:

1. Competency in human relations skills.
2. Competency in developing positive attitudes in pupils toward caring for and enhancing their environment.

Teacher educators place high priority upon teaching which improves the ways pupils and teacher work and live together and teaching which develops appropriate attitudes in children. These two competencies are among the most difficult to achieve in present preparation programs; however, teachers who come to Cispus do demonstrate growth in both.

Another dimension which does and should relate to the teacher preparation goals is the statement on public education goals, "What Are Schools for?" approved by the State Board of Education in 1973.

The Cispus preparation programs would coincide with or strengthen a number of these state goals, particularly the process goals since four of the eight process goals would

relate unusually well to a Cispus based preparation program, notably:

1. The process of education should respect the uniqueness of each learner.
2. The process of education should provide increasing opportunities for individual self direction and decision making.
3. The process of education should provide learning experiences matched to each student's readiness to learn and the way he learns best.
4. The process of education should extend learning opportunities beyond the school building, school day, and school year.

In addition, three of the ten product goals would be strengthened by the Cispus program. These are:

1. As a result of the process of education, each student should appreciate the wonders of the natural world, man's achievements and failures, his dreams, and his capabilities.
2. As a result of the process of education, each student should clarify his basic values and develop a commitment to act upon these values within the framework of his rights and responsibilities as a participant in the democratic process.
3. As a result of the process of education, each student should use leisure time in positive and satisfying ways.

The remaining goals could probably be equally well achieved in either a campus oriented, a field oriented, or a Cispus based program.

In the discussion to this point it is evident that the major thrust of the Cispus preparation program(s) is dual: that of humanizing the preparation program and that of improving environmental education throughout the state.

In describing preservice teacher preparation programs too little has been said about the place and the importance of the student's clinical experience with competent,

experienced "master teachers"--observing their work with children, taking part in their work, and performing under their guidance. Certainly important dimensions of this experience must be:

1. The extent and variety of his clinical experience.
2. The calibre of his supervising professor and his cooperating master teacher.
3. The circumstances under which the master teacher and the cadet teacher work.

Each preparation model proposed in this document increases the extent and/or the variety of the cadet teacher's clinical experience. In most cases he would have both a longer experience and work with a greater variety of teachers.

Several observations can also be made about the calibre of the master teachers with whom a cadet would work at Cispus:

1. The calibre of teachers bringing children to Cispus is generally superior.
2. Teachers at Cispus work with more clearly developed guidance than teachers in any other public school situations in the state, and they will get increasingly more helpful guidance.
3. If the experience with each master teacher is long enough to be meaningful and to allow a real acquaintance and comraderie to develop, it is better for a cadet to work with several master teachers than one. This approach provides a powerful safeguard against any very bad experience due to an inappropriate assignment.

The circumstances under which master teachers and cadets work at Cispus seem to lead to a number of benefits which accrue from a round-the-clock, semi-outdoor situation--benefits highly relevant to the development of the skills, understandings, and attitudes critical in good teaching.

Specific objectives for teacher candidates during the Cispus phase of the preparation program in the models described below are:

1. To increase their competency in designing and implementing teaching strategies which elicit appropriate changes in pupils' attitudes toward their environment.
2. To enable them to generalize this teaching experience to plans and strategies for achieving other affective learning outcomes. Working and dealing with children in a life-situation over a period of time allows one a remarkable opportunity to perceive--and to improve--the effects of his behavior upon children.
3. To increase their competency in human relations skills through work with public school pupils at Cispus. Additionally, observing children in a situation in which they live and work and consequently become unusually well acquainted with other children, both from theirs and from other schools, can be particularly instructive.
4. To provide an opportunity for them to demonstrate Cispus-acquired human relations skills in teaching situations away from Cispus. Living and working closely with fellow teachers allows for deeply significant exchanges regarding all aspects of teaching. This enhances the work of master teachers through exchanges with other master teachers and with cadets and work of cadets both through exchanges with other cadets and through exchanges with master teachers.

The preparation programs include several alternative models which provide the college students experiences at Cispus of varying lengths and with varying degrees of responsibility for the learning of elementary pupils. Each model can be evaluated in terms of the growth in competency of the teacher trainees in that model as well as through comparative group approaches.

The following models are based on the assumption that approximately 15 full-time preservice preparation students--a maximum of 45 per academic year--is an optimum working

number and that the models are open-ended ideas which would have to be elaborated before implementation.

Model A -- Two-week Cispus experience

Fifteen students of teaching who are interns or student teachers will spend a week early in the internship at Cispus as observers and planners; then they will return to the elementary classroom where they are interning; and finally, they will come back to Cispus with their elementary pupils and lead them in an intensive, full-time environmental study at Cispus.

Tc be moderately successful in teaching about the environment, a minimum cognitive background is essential. Therefore, before coming to Cispus, these fifteen students will be given a brief knowledge test over concepts deemed essential by the Cispus faculty. Appropriate independent study programs would be assigned before the Cispus experience to compensate for gaps in knowledge shown by members of this group.

Model B -- Quarter-long Cispus experience

Prior to student teaching or internship, 15 students of teaching will spend a quarter at Cispus as full-time students of environmental education. They will observe and participate as teaching assistants during visits to Cispus by elementary classes. They will attend seminars on environmental study with faculty at Cispus. They will study independently using the special collection of materials at the training center and undertaking special projects related to the environment. Their quarter at Cispus will be

culminated by preparing detailed teaching plans with the appropriate study materials for their future student teaching.

Model C -- Quarter plus interning

Fifteen students of teaching will combine Models A and B by spending a quarter in environmental study at Cispus prior to student teaching, then during student teaching or internship returning to Cispus for a week-long environmental study and demonstration of competence.

Model D -- Quarter plus summer

This option includes an initial full quarter assignment during the student's sophomore or junior year as a public school teaching assistant. After completion of the initial quarter as teaching assistants, the 15 students selected for the project will follow through the program design summarized below:

1. They will attend a one-week retreat in August for orientation, pretesting, and preplanning.
2. During the academic year they will spend one quarter at the Cispus Environmental Center studying and working with public school teachers and pupils.
3. Following the Cispus experience and completion of on-campus requirements, students will intern in an urban center classroom, following up contacts made at Cispus.
4. During June, the students and the cooperating teachers in whose classrooms they interned will participate in a two-week workshop, devoting the first week to evaluation and the second week to the development of curriculum and instructional materials.

Because of limited personnel, space and financial resources, all four models could not be implemented

simultaneously; however, several could be managed at the same time, permitting the others to remain as future program alternatives.

EVALUATION OF STUDENT COMPETENCIES

The exit level competencies of each of these groups of students will be assessed during the final two weeks of their student teaching or internship. A control group of student teachers will be used for comparison purposes. The criterion-assessment will include:

1. The number of objectives which they define that are directed towards "tendencies"[1] or toward the affective domain.
2. The number of examples of strategies which take advantage of "teachable moments."
3. The number and quality of assessments in which they record, or note, evidence of changes in their pupils' "tendencies."
4. Analysis of the interaction among pupils in each of their classrooms to determine such elements as relative proportion of non-directive responses, emphasis on higher levels of thinking, etc.
5. The number of instances during which they change or adapt their teaching strategies on the basis of pupil responses--especially where these adaptations are part of a general plan to implement tendencies on the part of pupils.
6. Evidence of the total spectrum of competencies normally expected of graduating teacher candidates. (In this assessment, students would be compared against non-Cispus teacher candidates to determine whether the Cispus experience detracted from the general competency expectation.)
7. Extent of the learning of pupils in their classrooms in both abilities and tendencies. The comparison would be based upon the individual achievements of pupils rather than comparison of groups of children on the basis of standardized tests.

Other criteria would also have to be included as they are

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[1]Johnson, Harry W., "The Poor Man's Taxonomy," 1953.

appropriate to each model or program. Among the methods which should be used in collecting data are the following.

Data Collection Processes:

1. All of the students of teaching who are participants in this exploration would be asked to use the same forms for writing their teaching plans and for recording the achievements of their pupils. The forms would make special provisions for stating both ability and "tendency" outcomes, for revising objectives and strategies on the basis of initial teaching, and for recording a variety of pupil responses.

A form of this kind is now used by students in the WWSC Clinical Program--a "Test of Instructional Competency."

2. The supervisors--college faculty and cooperating teachers--would be given simple instructions and some practice in making observations of classroom interaction. They would then use a simplified interaction analysis form to make observations of the kinds of responses made by the intern and by his pupils.

3. Supervisors of the intern would record evidence of adaptive teaching in appropriate spaces on the interaction analysis form.

Obviously, other traditional data--grades, credits, test scores, endorsements, etc.--would also be available for consideration.

Data Treatment:

1. The data gathered by the students of teaching and

by their supervisors would be organized so that quantitative comparisons could be made among the Model A, B, C, and D groups and the control group.

2. The same data would be analyzed to make qualitative comparisons. The emphasis here would be on the description of the relative style of the students of teaching in the four groups, particularly with regard to their pupil relationships and their skill and concern in teaching affective objectives.

Student Recruits: Students for the program could, and should, be recruited both from the general campus populations and from the pool of eligible but not currently enrolled people. This, however, requires some lead time, a detailed program description, and brochures to publicize the program. In the meantime there are two compatible projects on several campuses which have enrolled students who could benefit from some Cispus experience. These are the Career Opportunities Programs and the Teacher Corps Programs. Central has two C.O.P. programs; and Central, Western, the University of Washington, and Washington State University have Teacher Corps programs.

The Hypotheses: Students of teaching who have an intensive experience at Cispus will demonstrate greater tendencies than comparable students without this experience to teach towards affective goals; to spend more time on environmental education; and to demonstrate a more "open" and less authoritarian mode of working with their pupils.

Students in Model B, C, and D will show greater degrees of the above differences than students in Model A.

The data will be used to design a revised model for environmental education to be undertaken by college students who aspire to teach elementary or middle school pupils. Hopefully, the resulting preparation program will have a degree of predictable success in increasing the competency of future teachers in two critical areas:

1. The ability to implement appropriate changes in affective behavior.
2. The skill in relating to pupils as individual human beings with unique potential for learning and developing.

Such a result could be a milestone in humanizing competency-based teacher education.

PROGRAM EVALUATION MODELS

In assessing the value of this or any program, one should probably look at several alternative approaches. The circumstances to which those various approaches probably apply can then be considered vis-a-vis the program under consideration and a plan or combination of plans be selected. Several plans or models could be used for the Cispus preservice teacher education program:

1. Pre- and Post-testing Model

This is appropriate when: (a) the nature of the program is established, (b) the changes to be assessed are clearly defined in advance, (c) there are means available to assess those changes--i.e., one can buy the appropriate instruments or the time of the necessary experts, and

(d) there are methods and criteria for evaluating the changes from the assessment data. For example, if one wanted to evaluate a shot-put coaching program, one could establish the participant expectations in terms of change in distance achieved under Olympic rules and one could buy the equipment necessary for the assessment. However, there is still the question of establishing proper criteria for evaluating the change, e.g., if an athlete improved by seven feet and four inches in three weeks of practice, would that be good or bad? Obviously the criteria for determining success must be based on a number of factors, especially on the characteristics of the learner.

For Cispus, this is a plausible model since it requires no outside reference group; but herein lies its weakness, for it fails to provide a valid basis for comparability--lacking commonly applicable criteria of evaluation.

2. Parallel Group Model

This is appropriate when: (a) the nature of the program is established, (b) one has clearly defined all the changes to be taken into account, (c) means of assessment are available, and (d) there are two or more reasonably equated groups which can be compared on the basis of anticipated outcomes. In this model, groups must be selected by a process such as random-sampling or matched pairs to avoid the contamination of group bias. For example, selecting as "comparison groups" those boys in a class who volunteered for a new shot-put program as group A;

and as group B the boys from the class who had equivalent heights and weights, would be ridiculous. In this case, the possibility of significant differences in motivation is too great.

For Cispus, this model would be appropriate but difficult to implement until there is a larger number of students in the program. Too, the problem of preselection bias in the group who opt for the Cispus program should be controlled or noted by preassessment; for it may well be those students who elect the program do so because they are already more flexible, more skillful in human relations, and more "environmentally oriented" than their peers. Thus, they should demonstrate higher level exit competence in these areas.

3. Clinical Testing Model

This method is appropriate when: (a) the nature of the program is established, (b) the changes to be taken into account have not been clearly defined, and (c) however, a very comprehensive assessment of the subject(s) can be made before and after application of the program. For example, if a track team were to be put on a radical new diet or an intensive course in yoga or auto-suggestion--the coach and trainer would probably desire to make numerous, careful pre- and post-observations and records. In such a model, however, some of the important data is subjective and not easily quantifiable--notably attitude changes and their effect on performance.

For Cispus, this model is appropriate, particularly in the early stage of program implementation before outside criterion groups have been identified and before there is real consensus on anticipated student outcomes.

4. Logical Testing: Partial Evidence Model

This model is appropriate when: (a) the nature of the program is established, (b) the program has a clear underlying rationale, (c) the steps of the rationale seem consistent with the available evidence and/or expert opinion, (d) however, it is either infeasible or too expensive in money and time to get direct evidence on the total impact of the program. This is a very common situation: the students in the program cannot be identified soon enough to make "pre-post" assessment; the graduates cannot be readily located for follow-up; students cannot be arbitrarily assigned to "parallel groups;" and the comprehensive assessment essential to "clinical testing" is not economically possible in the time available. An example may be found in any program which is already started or about to be started and for which the evaluation plan has not already been formulated and base-line data collected.

For Cispus, this model would seem financially and practically feasible on the short run, but it should not become the sole means of evaluation.

5. Discrepancy Testing Model

This method is appropriate when: (a) the nature of the program has not been established, but (b) it is possible

to get an explicit plan, including (1) output, (2) process, (3) intermediate or enabling objectives, and (4) output objectives. Most programs fall into this category. For example, a coach might have a perfectly clear training program laid out, including careful records of progress, but be open to changes in either methods or expectations as the training progressed. This model requires that evaluation be based on a comparison between program expectations and actual occurrences. It compares what actually happened in a program with what was planned or projected to happen. Thus it does not require, as do several other models, the use of comparison groups or subject follow up. One of the best discussions of this model is contained in Provus' book on discrepancy evaluation.[1] For a Cispus preparation currently in development, this pragmatic evaluation model would be useful both in assessing results and in helping planners crystalize the program plans.

An Ecclectic Evaluation Plan

Within the parameters noted earlier, it is possible and desirable to utilize each of the five models which have been reviewed, shifting from one to another as the program grows and develops. As the program becomes well established, both sophisticated means of evaluation and experimental research become plausible. With this incomplete preparation program,

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[1]Provus, Malcolm, Discrepancy Evaluation for Educational Program Improvement and Assessment. Berkeley: McCutchen Publishing Corporation, 1971, Chapter 3 and p. 184.

we should probably begin by following Provus' Discrepancy Evaluation Model (#5). For established training patterns, the Logical Testing Model is probably the most appropriate one. However, to the extent that the student population can be defined well enough to allow valid generalizations, we should use pre- and post-testing on as many criteria as possible. Also, recognizing that truly parallel groups are impractical, we should get eye-witness reports from as many observers as possible--both student teachers and persons working with student teachers--people who have had the opportunity to experience and to observe the comparative effects of Cispus and other teacher education patterns.